

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
5 August 2004 (05.08.2004)

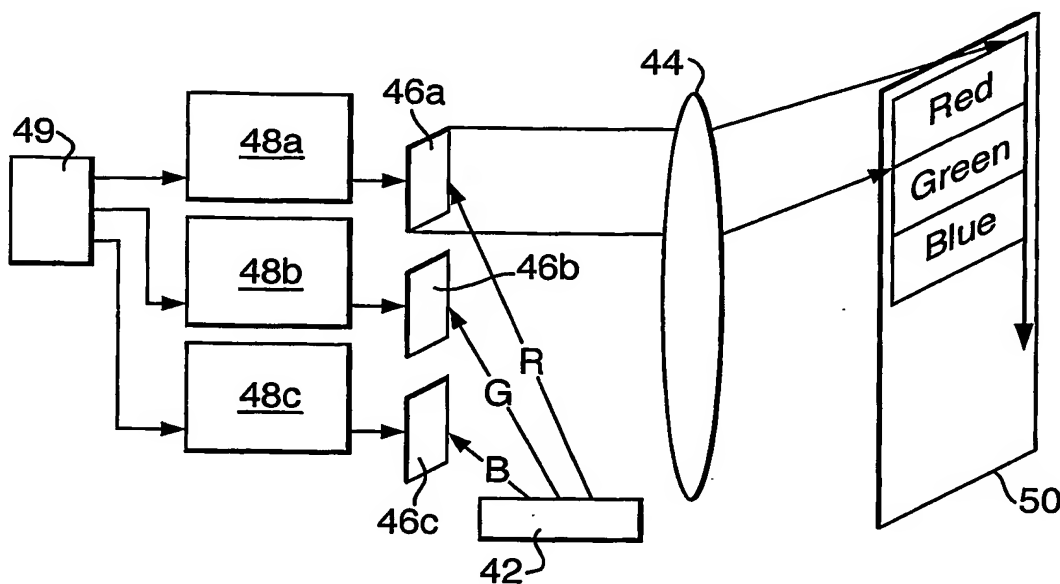
PCT

(10) International Publication Number  
**WO 2004/066037 A1**

- (51) International Patent Classification<sup>7</sup>: **G03H 1/22**, H04N 5/74, G03H 1/08
- (21) International Application Number: PCT/GB2004/000224
- (22) International Filing Date: 19 January 2004 (19.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0301317.4 21 January 2003 (21.01.2003) GB
- (71) Applicant (for all designated States except US): **HOLOGRAPHIC IMAGING LLC** [US/US]; 2100 East Maple, Suite 500, Birmingham, MI 48009 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MILLER, Richard, Jonathan** [GB/GB]; Qinetiq Limited, Malvern Technology Centre, St Andrews Road, Bldg E823, Malvern, Worcs WR14 3PS (GB).
- (74) Agent: **DUNN, Paul**; QinetiQ Ltd, IP Formalities, Cody Technology Park, A4 Building, Room G016, Ively Road, Farnborough, Hampshire GU14 0LX (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: IMAGE PROJECTION DEVICE AND METHOD



(57) Abstract: A device for forming an image on a screen (50) is described that comprises a coherent illumination means(42), an electrically addressed spatial light modulator means (46) located in the path of light from the coherent illumination means, means for producing computer generated hologram images (49) for display on the electrically addressed spatial light modulator means, and optics (44) to direct light diffracted by the electrically addressed spatial light modulator means to the screen (50). The device is arranged so that a computer generated image or images displayed by the electrically addressed spatial light modulator means result in a two dimensional image being formed at the screen.



**Declaration under Rule 4.17:**

- of inventorship (Rule 4.17(iv)) for US only

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*